4: Cummins D-4 (no date) 1937 MD1 Syria MD1

DERMATOGLYPHICS IN PEOPLES OF THE NEAR EAST

I. LEBANESE: MITWALI

HAROLD CUMMINS AND W. M. SHANKLIN
Tulane University and American University of Beirut, Syria

121 This report is presented as a record of data toward an eventual analysis of racial variation in dermatoglyphics. It is to be hoped that a broad comparison of races on this basis may be eventually possible, but it will be necessary to continue the accumulation of records on various populations, perhaps from time to time taking stock of progress as has been done recently by Steggerda, Steggerda and Lane for the palmar features (Middle American Research Series, publication 7, Tulane University, '36).

124 101 795 The material here treated represents a population not hitherto investigated from the standpoint of dermatoglyphics. The Mitwali are a Syrian mountain people, living in the southern Lebanon range. They are Moslems, but adhere to the Shiite sect rather than to the Sunni which is common to the region. There are 138 subjects in the series, males and females being in the proportion of about two to one; in view of the small numbers the sexes are combined. The subjects are mainly children in the government schools, the adult population having proved generally unsuitable for printing—on account of extensive callouses.

141 128 The palmar features, main lines and patterns, are tabulated in tables 1 and 2, their formulations following the methods of Cummins et al. (Am. J. Phys. Anthrop., XII, '29).

The data on lines A and D have been further analyzed, to determine the main-line index which has been suggested by Cummins (Middle American Research Series, Tulane University, publication 7, '36) as a value denoting the degree of slant of the general palmar configuration. For the 276 hands

AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY, VOL. XXIII, NO. 2
JANUARY–MARCH, 1937

4: Cummins D-4 (no date) 1937 MD1 Syria MD1

[4] 128 in this collection the mean index is 8.50 ± 0.09. Right hands alone yield a mean of 9.33 ± 0.11, and the lefts, 7.67 ± 0.12.

Axial triradii present the following percentile occurrences, right and left hands being here combined since no significant

TABLE 1

Terminations of the palmar main lines, stating the percentile occurrence of each position

POSITION	LINE A			LINE B			LINE C			LINE D		
	R	L	Both	R	L	Both	R	L	Both	R	L	Both
1	0.7	9.4	5.0									
2	0.7	7.2	3.9									
3	34.1	52.2	43.1									
4	10.1	9.4	9.7		0.7	0.3						
5′	49.3	21.7	35.5	2.2	4.3	3.2						
5″	5.1		2.5	31.2	49.3	40.2	5.8	15.9	10.8			
6				9.4	11.6	10.5	2.9	2.9	2.9			
7				50.0	32.6	41.3	18.8	23.2	21.0	5.8	16.7	11.2
8				3.6		1.8				2.2	2.9	2.5
9				3.6		1.8	53.6	31.2	42.4	26.1	34.8	30.4
10							3.6		1.8	8.7	11.6	10.1
11							2.9		1.4	57.2	33.3	45.2
X							5.1	17.4	11.2			
x							0.7	2.2	1.4			
O					1.4	0.7	6.5	7.2	6.8		0.7	0.3

R = right, L = left.

TABLE 2

Percentile occurrences of true patterns and pattern vestiges (not including 'multiplications') of the five palmar areas

PATTERN	RIGHT	LEFT	BOTH
Hypothenar	32.6	29.7	31.1
Thenar/first interdigital	8.7	19.6	14.1
Second interdigital	9.4	3.6	6.5
Third interdigital	68.1	47.8	57.9
Fourth interdigital	47.8	67.4	57.6

bimanual differences are noted: 0, 0.7; t, 71.7; t′, 14.5; t″, 1.1; tt′, 6.9; tt″, 4.0; tt′t″, 0.4; t′t″, 0.7.

Frequencies of the finger-print types, classified by the usual fourfold scheme, are as follows: arches, 2.7%; radial loops, 4.2%; ulnar loops, 50.9%; whorls, 42.2%. The abundance of whorls is noteworthy.

4: Cummins D-4 (no date) 1937 MD1 Syria MD1

As pointed out by Cummins and Steggerda (Am. J. Phys. Anthrop., XX, '35), the pattern types may be regarded as variants of 'pattern intensity.' The arch is not a pattern in the strict sense of the term, while loops and whorls may be regarded as levels of successively increasing pattern intensity. For statistical purposes arbitrary values are assigned to the pattern types: arch, 0; loop, 1; whorl, 2. The complement of patterns in an individual is then converted into the 'index of pattern intensity' by summating the values of

TABLE 3

Percentile occurrences of pattern types for each digit

Digit	I			II			III		
Hand	R	L	Both	R	L	Both	R	L	Both
Whorls	68.1	55.8	61.9	52.2	47.8	50.0	27.5	31.9	29.7
Ulnar loops	29.0	42.8	35.9	22.5	27.5	25.0	66.7	62.3	64.5
Radial loops	1.4	0.7	1.0	18.8	17.4	18.1	1.4	1.4	1.4
Arches	1.4	0.7	1.0	6.5	7.2	6.8	4.3	4.3	4.3

Digit	IV			V		
Hand	R	L	Both	R	L	Both
Whorls	50.0	44.2	47.1	24.6	20.3	22.4
Ulnar loops	48.6	55.8	52.2	74.6	79.0	76.8
Radial loops	0.7	0.0	0.3	0.0	0.0	0.0
Arches	0.7	0.0	0.3	0.7	0.7	0.7

R = right, L = left.

the ten patterns. The indices therefore range from 0, indicating ten arches, to 20, the value for ten whorls. The mean index in the present series is 13.96 ± 0.20. As a matter of record, providing for other statistical determinations such as the dactylodiagram of Poll, the frequencies of pattern types on separate digits are here recorded in table 3.

SUMMARY

Palmar main lines, axial triradii, palmar patterns and fingerprint patterns are analyzed in 138 Mitwali, a Syrian mountain population. It may be noted that the features present a close relationship to another Lebanese series as well as to the Bwala Arabs (unpublished data).